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C. BEST

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CIGARETTE-MAKING MACHINES

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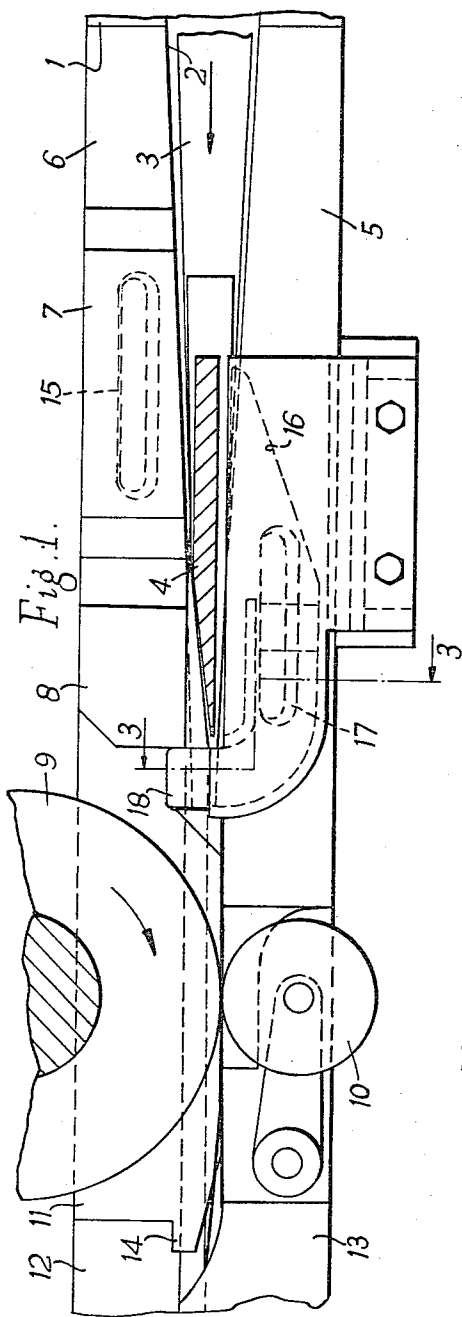


Fig. 3.

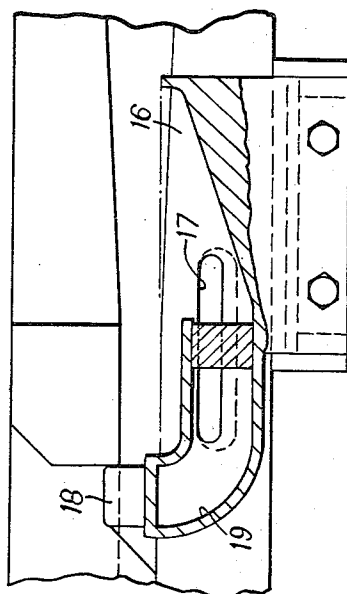
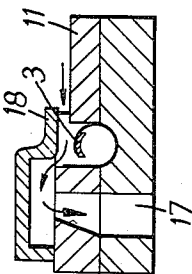


Fig. 2.

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CIGARETTE-MAKING MACHINES

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1 Claim. (Cl. 131-66)

This invention concerns improvements in cigarette-making machines and particularly that part of a continuous-rod cigarette-making machine which is known as the "garniture."

The garniture comprises that part of the machine in which the continuous web of cigarette paper is folded around the tobacco filler to form a rod. It is well-known that during the folding operations tobacco dust or fine particles of tobacco tend to be deposited upon the various parts of the garniture and is well-known to provide suction devices for removing this dust.

The cigarette paper is first folded around the tobacco filler into an almost circular form with one upstanding portion to which paste is applied to seal the rod. It is sometimes found that fragments of tobacco are deposited on this upstanding part and when it is folded down to seal the rod these tobacco fragments are trapped between surfaces of the lap and give the cigarette an undesirable appearance.

The object of the invention is to provide improved suction devices for dust removal and in particular to prevent tobacco fragments from being deposited on the upstanding part of the paper and the cooperating horizontal part which together constitute the lap, and eventually coming to lie between the paper surfaces of the lap.

According to the invention there is provided a dust suction device for the garniture of a continuous rod cigarette making machine having a pasting device for joining the margins of the web to provide a lap and a dust exhaust system, said device comprising a hood mounted on a garniture at a position where it is located above the partly wrapped rod just before the latter passes to the pasting device of the machine at which position the paper web is folded around about three-quarters of the circumference of the rod and so that one margin of the paper is over the top part of the rod while the other margin is at the top of a substantially vertical upstanding part of the web, said hood being connected to the exhaust system and shaped to admit air so as to flow across the first said margin of the paper web and impinge on the upstanding part of the paper web and flow upwards over the surface thereof whereby any tobacco fragments which may have settled on said upstanding part or the other margin are drawn away therefrom and carried into the exhaust system of the machine.

The device may further comprise ducts positioned near parts of the garniture preceding the position where the hood is mounted and connected to the exhaust system in order to remove dust from said parts of the garniture.

The invention will be described with reference to the accompanying drawings, in which:

FIGURE 1 is a plan, partly in section, of part of a garniture of a continuous-rod cigarette-making machine,

FIGURE 2 is a view of a fragment of FIGURE 1, partly cut away to show the interior of a suction device,

FIGURE 3 is a section of FIGURE 1 on the line 3-3.

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Referring to FIGURE 1, the garniture comprises a grooved block or base 1 having a groove 2 which converges as shown, the bottom of the groove being of arcuate shape. Mounted upon the block 1 are a number of plates or blocks described below and constituting folders whereby the cigarette paper is gradually folded over to the circular shape. During the initial stages of this process the tobacco is isolated from the overhanging paper as it is folded, by a tapering arcuate member 3, known as the tongue, which is supported from above by a rib 4 which is shown in section. The aforesaid plates comprise one long plate 5 on one side of the converging groove and cooperating plates 6, 7 and 8 on the other side, and it will be seen that at the time the rod reaches a position near the section line 3-3 the paper has been folded in the manner clearly shown in FIGURE 3 so as to leave one upstanding part to which paste is later applied by a paste wheel 9 cooperating with a presser wheel 10. During this pasting operation the paper is controlled by another folder 11 and shortly afterwards the rod passes between plates 12 and 13 to complete the wrapping, and which, together with the block 1, define a hole usually circular, which completely surrounds the wrapped rod. In order to control the paper as accurately as possible, the plate 11 has an extension 14 extending very closely towards the beginning of the said circular hole.

Dust or fragments of tobacco will naturally accumulate on the tongue 3 and the plates 5, 6, 7 and 8 and to remove as much of this as possible the plate 7 has a thin slot (not shown) formed in the side nearer the tongue, through which much of this dust is sucked to pass through a duct 15 leading to the exhaust system of the machine. In the same way dust at the other side of the tongue is picked up by a nozzle 16 leading to a duct 17 through which the dust is conveyed to the exhaust system. The parts near the end of the tongue are covered by a hood 18, which is best seen in FIGURE 3, and as this communicates through a curved pipe 19 with the nozzle 16, any dust picked up in the hood will be drawn into the exhaust system. The path of the air will be as indicated by the arrows in FIGURE 3, from which it will be seen that the air flows over the horizontal part of the lap and carries away any dust and after impinging on the vertical part of the lap it will flow upwards, thus carrying away any dust deposited on said vertical part. In other words the garniture and associated parts are kept free of dust and in particular the margins of the web which eventually constitute the paper lap, that is, the vertical and upper curved parts shown in FIGURE 3 are swept free of any dust because of the air current passing across them in the manner shown.

What I claim as my invention and desire to secure by Letters Patent is:

A dust suction device for the garniture of a continuous rod cigarette-making machine having a pasting device for joining the margins of the web to provide a lap, and a dust exhaust system, said suction device comprising a hood mounted on the garniture at a position where it is located above the partly wrapped rod just before the latter passes to the pasting device of the machine, at which position the paper web is folded around about three-quarters of the circumference of the rod and so that one margin of the paper is over the top part of the rod while the other margin is at the top of a substantially vertical

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upstanding part of the web, said hood being connected to the exhaust system on that side of the rod having said upstanding part of the web and having a top and two side walls, one of said side walls having an air inlet aperture on that side of the partly wrapped rod opposite from said upstanding part of the web to admit air and to cause such air to flow across the surface of the first said margin of the paper web substantially at right angles to the edge of said margin and impinge on the upstanding part of the paper web and flow upward over the surface thereof whereby any tobacco fragments which may have settled on said upstanding part or the other margin are drawn

away therefrom and carried into the exhaust system of the machine.

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